

Analysis of Economic and Social Data
ECO 2147
Mid Term Exam
ANSWERS
March, 2016

- 1) A price ratio that compares the price of the same product at two different points in time is called a
 - a) Relative price
 - b) Price relative
 - c) Seasonal prices
 - d) Computer prices
 - e) Notional prices

- 2) The latest Daily release about the CPI shows that Canada's annual inflation rate in January 2016 is closest to:
 - a) 0.5%
 - b) 1.0%
 - c) 1.5%
 - d) 2.0%
 - e) More than 2.0%

- 3) In which province did consumer prices rise the least on an annual basis in January 2016?
 - a) Quebec
 - b) Ontario
 - c) British Columbia
 - d) New Brunswick
 - e) Alberta

- 4) Which two major components contributed to the increase in the CPI in January 2016 (The latest figure released)?
 - a) Clothing and Shelter
 - b) Food and Shelter
 - c) Food and Clothing
 - d) Transportation and Clothing
 - e) Transportation and Food

- 5) Which of the following is *not* an unweighted price index formula?
 - a) Dutot price index
 - b) Harmonic price index
 - c) Carli price index
 - d) Fisher price index
 - e) Jevons price index

- 6) The geometric mean of the ratio of price relatives describes which of the following price index formulas?
- Dutot price index
 - Carli price index
 - Marshall-Edgeworth price index
 - Jevons price index

- 7) The following index formula is defined as a

$$\frac{\sum_{i=1}^n p_i^0 q_i^t}{\sum_{i=1}^n p_i^0 q_i^0}$$

- Laspeyres price index.
 - Paasche price index.
 - Carli price index.
 - Paasche quantity index.
 - Laspeyres quantity index.
- 8) The retail trade data for December 2015 showed
- A decrease from the previous month because of later snowfalls and unseasonably warm weather in many parts of Canada during that month.
 - A decrease from the previous month because of Canadian's propensity to spend less during the holiday season.
 - An increase from the previous month because the unseasonably warm weather in many parts of Canada made it easier for shoppers to get out to the stores.
 - An increase from the previous month because of retailers introduced deeper discounts that month.
- 9) Typically, because of the substitution effect as a result of a change in prices, the Laspeyres price index will be _____ the Paasche price index.
- Higher than
 - Lower than
 - Equal to
- 10) How frequently is the Canadian CPI released to the public?
- Weekly
 - Monthly
 - Quarterly
 - Annually
- 11) Which of the following is not a measure of central tendency?
- Standard deviation
 - Mode
 - Median
 - Mean
- 12) The discipline of quantitatively describing the main features of a collection of information is called
- Inferential statistics.
 - Descriptive statistics.
 - Economic statistics.
 - Inductive statistics.

- 13) True (a) or false (b), most monthly data published by Statistics Canada are presented in seasonally adjusted form.
- 14) Which of the following price indexes is used by most national statistical agencies for compiling their CPI because it is a more practical option.
- a) Paasche price index
 - b) Laspeyres price index
 - c) Lowe price index
 - d) Fisher price index
 - e) Drobish price index
- 15) Which index number formula passes the circularity test?
- a) Fisher
 - b) Laspeyres
 - c) Paasche
 - d) Edgeworth-Marshall
 - e) None of the above
- 16) Which index number formula passes the factor-reversal test?
- a) Fisher
 - b) Laspeyres
 - c) Paasche
 - d) None of the above
- 17) Which of the following index number formulas does not pass the units of measurement (or commensurability) test?
- a) Jevons
 - b) Dutot
 - c) Carli
 - d) Harmonic
- 18) True (a) or false (b), tax data can be an important source of economic and social data.
- 19) The following statement is drawn from which source? "Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes"
- a) The UN's Fundamental Principles of Official Statistics
 - b) The IMF's mission statement
 - c) The Canadian Statistics act
 - d) The Canadian constitution
- 20) Which of the following choices is not considered a symmetrically weighted price index?
- a) Fisher price index
 - b) Edgeworth-Marshall price index
 - c) Walsh price index
 - d) Laspeyres price index
- 21) True (a) or false (b), when a construction worker has to answer a question about work injuries by a yes or a no in a survey, the data generated by this question is known as quantitative data.

- 22) A data series that contain observations of multiple phenomena obtained over multiple time periods for the same firms or individuals is defined as?
- Cross-sectional data
 - Time-series data
 - Panel data**
 - Dynamic data
 - Economic data
- 23) International investors prefer to invest in countries that
- Increase taxes
 - That do not borrow from abroad
 - Invest in the production of good statistics**
 - Lowers overall government spending including the budgets for its statistical programs.

| | Quantity of Burgers | Price of Burgers(\$) | Quantity of Milkshakes | Price of Milkshakes(\$) |
|------|---------------------|----------------------|------------------------|-------------------------|
| 2005 | 100 | 2.00 | 50 | 1.00 |
| 2006 | 120 | 3.00 | 75 | 1.50 |
| 2007 | 125 | 4.00 | 25 | 3.00 |

- 24) From the above table (assuming that 2005 = 100), the Laspeyres price index for 2006 is closest to
- 100
 - 125
 - 150**
 - 200
 - 210
- 25) From the above table (assuming that 2005 = 100), the Laspeyres price index for 2007 is closest to
- 100
 - 125
 - 150
 - 210
 - 220**
- 26) From the above table (assuming that 2005 = 100), the Paasche price index for 2006 is closest to
- 100
 - 125
 - 150**
 - 210
 - 220
- 27) From the above table (assuming that 2005 = 100), the Paasche price index for 2007 is closest to
- 100
 - 125
 - 150
 - 210**
 - 220

- 28) From the above table (assuming that 2005 = 100), the Laspeyres quantity index for 2007 is closest to
- a) 110
 - b) 115
 - c) 130
 - d) 160
 - e) 180
- 29) From the above table (assuming that 2005 = 100), the Fisher price index for 2007 is closest to
- a) 100
 - b) 125
 - c) 150
 - d) 215
 - e) 220
- 30) From the above table (assuming that 2005 = 100), the Carli price index for 2007 is closest to
- a) 100
 - b) 225
 - c) 235
 - d) 245
 - e) 250
- 31) From the above table (assuming that 2005 = 100), the Jevons price index for 2007 is closest to
- a) 100
 - b) 225
 - c) 235
 - d) 245
 - e) 250
- 32) From the above table (assuming that 2005 = 100), the Dutot price index for 2007 is closest to
- a) 100
 - b) 225
 - c) 235
 - d) 245
 - e) 250
- 33) The problem with Statistics Canada's solar and wind energy data is that
- a) They are non-existent.
 - b) They overestimate the actual production of electricity from solar panels and wind turbines.
 - c) They underestimate the actual production of electricity from solar panels and wind turbines.
 - d) They only account for energy generated from wind turbines and not solar panels.
 - e) They only account for energy generated from solar panels and not wind turbines.
- 34) The Census in Canada is conducted on
- a) A one-year cycle
 - b) A two-year cycle
 - c) A five-year cycle
 - d) A six-year cycle
 - e) A ten-year cycle

- 35) True (a) or false (b), the Canadian population census is a voluntary survey.
- 36) Which of the following is not a method used by Statistics Canada for controlling the intrusiveness and reducing the burden of its surveys?
- a) Minimizing what is asked by using information that has already been collected through administrative purposes, such as tax or customs records.
 - b) Shortening and simplifying questionnaires and reducing the number of surveys.
 - c) Joint collection activities, such as joint federal-provincial surveys.
 - d) Establishing guidelines for determining when surveys should be voluntary and when mandatory.
 - e) Using more on-line type surveys that use the Internet.
- 37) Which of the following choices does not affect the respondent burden?
- a) the number of questions asked.
 - b) the intrusiveness of the questions.
 - c) the number of times the respondent is contacted (for a same survey or for many surveys).
 - d) the time it takes to complete the survey.
 - e) The cost of conducting the survey.
- 38) A survey that collects information from all the people in a group or population is called
- a) A census.
 - b) A sample survey.
 - c) Administrative data.
 - d) A poll.
- 39) One of the main reasons for choosing to conduct a sample survey instead of a census is
- a) The cost advantage of the sample survey.
 - b) Respondent burden.
 - c) The higher quality of the data that comes from a sample survey.
 - d) The difference size of the target population which is smaller with the sample survey.
- 40) True (a) or false (b), variation from one sample to another drawn from the same population is the cause of sampling error.
- 41) As a general rule, the _____ the number of people surveyed, the _____ the sampling error will be.
- a) larger; larger.
 - b) larger; smaller.
 - c) smaller; smaller.
 - d) smaller; larger.
- 42) With a census, the sampling variance is
- a) Greater than zero.
 - b) Zero.
 - c) Smaller than zero.
 - d) Depends on the size of the census.

- 43) True (a) or false (b), a badly designed survey questionnaire often leads to a what is recognized as Non sampling error.
- 44) With a normal distribution, the relationships among the three measures of central tendency are:
- a) Mean > Mode > Median
 - b) Mean > Mode ≤ Median
 - c) Mean ≤ Mode ≤ Median
 - d) Mean = Mode = Median
- 45) In which region or regions are small values of gender inequality usually displayed?
- a) North American countries.
 - b) European countries.
 - c) North American and European countries.
 - d) African countries.
 - e) African and European countries.
- 46) Which of the following is not considered a Dimension within the Multidimensional Poverty Index?
- a) Nutrition
 - b) Health
 - c) Education
 - d) Living Standard
- 47) Deflation occurs when the general price level is _____ and the value of money is _____.
- a) falling; rising.
 - b) rising; falling.
 - c) falling; falling.
 - d) rising; rising.
- 48) True (a) or false (b), the indexation of tax brackets is one of the many uses of the Consumer Price Index.
- 49) If the index in June 2016 is 143.6 when it was 125.4 in June 2015, then the annual rate of inflation would be:
- a) 14.5%
 - b) - 14.5%
 - c) 12.7%
 - d) - 12.7%
- 50) Recall from assignment 1, which province had the highest share of average household expenditures for alcoholic beverages?
- a) Québec
 - b) Ontario
 - c) Alberta
 - d) Newfoundland and Labrador
- 51) In assignment 2, you were asked to download information about Canada's largest companies. On what variable was the size of the companies based?
- a) Number of employees
 - b) Profit
 - c) Revenues
 - d) Costs

- 52) The following Table shows index numbers from 2008 to 2012 where the base is 2011 = 100.

| | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------|------|------|------|-------|-------|
| Index | 96.7 | 97.9 | 99.1 | 100.0 | 100.8 |

If the series is re-referenced to 2009 = 100, what would be the value of the re-referenced index for 2010?

- a) 99.1
 - b) 101.2
 - c) 98.7
 - d) 100
- 53) True (a) or false (b), from the Table in question 52, changing the reference year from 2011 to 2009, will change the value of the inflation rate between 2011 and 2012? In other words, you can expect a change in the base to change the inflation between both of these years.
- 54) Which house price index series showed the smallest increase in Vancouver during the last 15 years or so?
- a) Teranet/National Bank house price index
 - b) Statistics Canada's New House Price Index
 - c) Both showed a similar change.
 - d) The Canadian Real Estate Association's house price index series.
- 55) Which house price index series showed the smallest increase in Calgary during the last 15 years or so?
- a) Teranet/National Bank house price index
 - b) Statistics Canada's New House Price Index
 - c) Both showed a similar change.
 - d) The Canadian Real Estate Association's house price index series.